

WHAT IS CLAIMED IS:

1. A task program control system comprising:
  - a storing circuit which stores information showing priorities of a plurality of tasks and orders-per-priority;
  - a priority reading circuit which reads out the priority of the task of the highest priority from said storing circuit;
  - an order reading circuit which reads out order-per-priority data of the priority read out by said priority reading circuit;
  - a priority register which holds a value of said priority reading circuit;
  - an order register which holds a value of the order in the priority read out by said priority reading circuit;
  - an order-per-priority control circuit which sets a value of the highest order in said order-per-priority data read out by said order reading circuit into said order register and, when the value in said order register is read out, sets said read-out value so as to become the lowest order at such timing in the case where it is read out next; and
  - a task executing unit which reads out the values in said priority register and said order register as an address of a task which is executed next, executes said task, and after the execution, updates the information in said storing circuit on the basis of a value which said task has and shows whether the task itself is continued or stopped.
2. A system according to claim 1, wherein when the address of an arbitrary task is read out from said priority register and said order register, the information corresponding to said task in said storing circuit is cleared.

3. A system according to claim 1, further comprises:

a counter which counts a value of a read access from said task executing unit;

a masking circuit which has a predetermined value corresponding to a specific priority and outputs a count value of said counter when the count value exceeds said predetermined value; and

a specific priority reading circuit which, when the count value is outputted from said masking circuit, reads out the priority of the task of the highest priority among the priorities which are equal to and lower than said specific priority from said storing circuit.

4. A system according to claim 2, further comprises:

a counter which counts a value of a read access from said task executing unit;

a masking circuit which has a predetermined value corresponding to a specific priority and outputs a count value of said counter when the count value exceeds said predetermined value; and

a specific priority reading circuit which, when the count value is outputted from said masking circuit, reads out the priority of the task of the highest priority among the priorities which are equal to and lower than said specific priority from said storing circuit.

5. A system according to claim 1, wherein

a program table and a data table showing a program address and a data address corresponding to an arbitrary task are prepared, and

when the address of the arbitrary task is read out from said

priority register and said order register, said task executing unit executes the relevant task program on the basis of the addresses in said program table and said data table and the data is accessed.

6. A system according to claim 2, wherein  
a program table and a data table showing a program address and a data address corresponding to an arbitrary task are prepared, and  
when the address of the arbitrary task is read out from said priority register and said order register, said task executing unit executes the relevant task program on the basis of the addresses in said program table and said data table and the data is accessed.

7. A system according to claim 3, wherein  
a program table and a data table showing a program address and a data address corresponding to an arbitrary task are prepared, and  
when the address of the arbitrary task is read out from said priority register and said order register, said task executing unit executes the relevant task program on the basis of the addresses in said program table and said data table and the data is accessed.

8. A task program control method comprising:  
a storing step of storing information showing priorities of a plurality of tasks and orders-per-priority into a memory;  
a priority reading step of reading out the priority of the task of the highest priority from said memory;  
an order reading step of reading out order-per-priority data of the priority read out by said priority reading step;

a priority holding step of holding a value of the priority read out in said priority reading step into a priority register;

an order holding step of holding a value of the order in the priority read out in said priority reading step into an order register;

an order-per-priority control step of setting a value of the highest order in the order-per-priority data read out in said order reading step into said order register and, when the value in said order register is read out, setting said read-out value so as to become the lowest order at such timing in the case where it is read out next; and

a task executing step of reading out the values in said priority register and said order register as an address of a task which is executed next, executing said task, and after the execution, updating the information in said memory on the basis of a value which said task has and shows whether the task itself is continued or stopped.